Fig. 3. Upper surface of the three molar teeth. The oblique valleys between the cusps are shaded.
Fig. 4. The three transverse roots of the hindmost molar.
Fig. 5. The outer side of the middle tooth, with the front cusp (*a*) and hind cusp (*b*).
Fig. 6. The inner side of the middle tooth, with the front cusp (*a*) and hind cusp (*b*).
Fig. 7. The two middle cusps (*a* and *b*) of the middle tooth seen from inner side and partly from above.

X.—*Variation in the Prothoracic Spines of* Dactylispa xanthopus, *Gestro*. By S. Maulik, B.A. (Cantab.), F.E.S.

In the 'Természetrajzi Füzetek,' vol. xxi. 1898, p. 262, Dr. Gestro described this species from one example which now exists as the type in the National Museum at Budapest. This particular individual was taken at Darjeeling. In examining the collection of Hispinæ belonging to the Indian Museum, Calcutta, I have come across a group of seventeen examples collected by Atkinson at Jalapahar, Darjeeling. They were all mounted on one card. Among this lot I find one example that answers Dr. Gestro's description well—viz., the insect is black and shining, the abdominal segments and the legs are yellow, the colour of the basal five joints of the antennæ is different from that of the remaining apical joints, each side of the prothorax has a group of three spines which may be regarded as having a common base. The front margin has a pair of double spines. The other examples of the same lot before me agree with the description in the main—viz., the general form of the insect, the coloration (black, with the abdominal segments, antennæ, legs, and mouth-parts yellow), but differ in the following structures :—

(1) On the front margin of the prothorax there are a pair of triple spines instead of double.
(2) On each side of the prothorax there is a group of four spines instead of three. The latter are arranged in two ways—in some specimens the four spines have a common base, in others the fourth may be regarded as standing separate.

In a note published in the 'Annales Musei Nationales Hungarici,' 1907, p. 72, Dr. Gestro identifies the examples

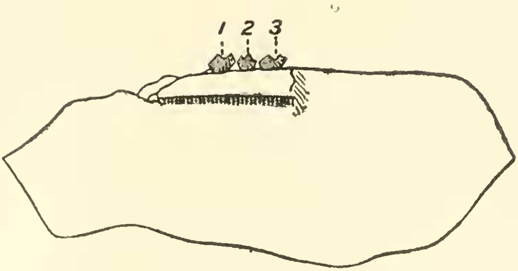


FIG. 1.

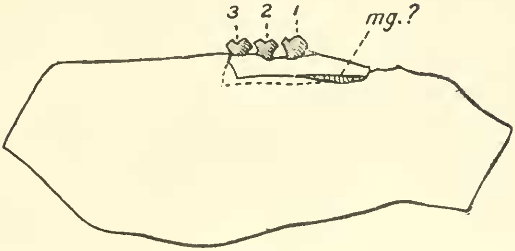


FIG. 2.

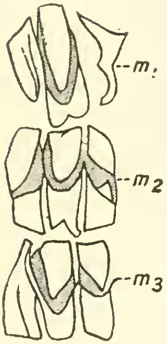


FIG. 3.

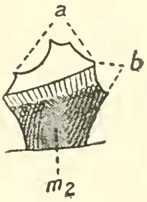


FIG. 5.

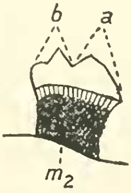


FIG. 6.

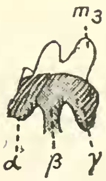


FIG. 4.

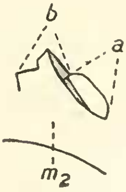


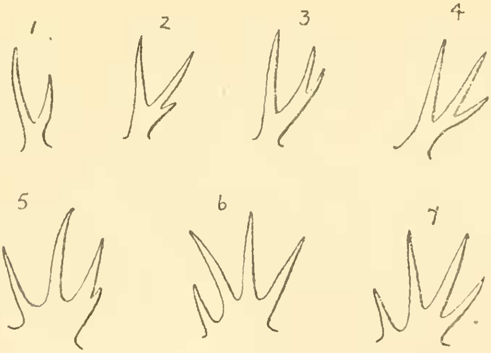
FIG. 7.

collected by Fruhstorfer from Sikkim as *D. xanthopus,* but points out that each side of the prothorax has got two spines, but he considers this circumstance an anomaly. He is quite right in thinking so. The object of this note is to show the variation in the number and formation of the prothoracic spines of *D. xanthopus.*

From the numerous examples before me it can be safely concluded that the normal number of the prothoracic spines is four on each side, and a pair of triple spines on the front margin—*i. e.,* three spines standing on a common stock.

Variation in the Spines on the Front Margin.

Normally there is a pair of triple spines. The horizontal distance between them is as usual in most species of the genus. The spines stand erect; the first is always an appendix to the second arising from its front side; it may arise either near the base (fig. 2) or a little above (fig. 3), its length may be quite small or it may attain the length of a normally developed spine (fig. 4), but it is always smaller than the second spine. The latter, together with the first, is slightly inclined forward. The third stands almost vertical and is the longest. The first spine may be entirely absent in some cases (fig. 1). Occasionally in the same individual



Dactylispa xanthopus.

Figs. 1, 2, 3, 4 are marginal spines at the front; 5, 6, 7 are the lateral groups of spines. The spines on the right of the figures point towards the head.

I have observed that of the pair of frontal spines, one consists of two spines and the other three. This, of course, is abnormal. There is no correspondence between the number of the frontal spines and the lateral ones. Each of the frontal pair may consist of two (fig. 1) or three, while the lateral group may be composed of four, three, or even two.

Variation of the Lateral Group of Spines.

The usual number is four, as is seen in the majority of specimens before me. They may be three, or even two, as Dr. Gestro has already pointed out in a little note. In one individual before me the group on the left side of the prothorax consists of three spines, while on the right there are three, with the first one having a little appendix arising from its front margin (fig. 5). The spines are slightly inclined outwardly to the vertical line, the front *i. e.*, one nearest the head is smaller than the second which follows it. The latter is inclined to be the longest, sometimes it is a little curved. The third is slightly shorter than the second. The fourth is always shorter than others; it is sometimes quite close to the third, but occasionally it may be considered as standing apart (fig. 7). For purposes of classification I should consider this group as consisting of four spines having a common broad base. It may be observed here that the individual having a lateral group of three spines has the basal joints of the antennæ ferruginous and has a fine longitudinal impression along the middle line. The whitish hairs on the surface of the prothorax are also more prominent. These characters are not seen in the examples having a lateral group of four spines.

From the above considerations it will be seen that the type-specimen at Budapest Museum from which the first description was drawn up is not typical of the species; it is only an aberration. The normal form is one with a lateral group of four spines. There are specimens of the normal form in the British Museum, in the Genoa Museum, and in the Indian Museum, Calcutta.

Description of the Insect.

Body elongate, with a little constriction in the middle. The colour is shining black, specially on the elytra. The mouth-parts, the antennæ, the abdominal segments, and the legs are yellow. The antennæ are slender, with the apical